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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,400	07/31/2003	Anjali Jha	020547	2926

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Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

DOAN, KIET M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,400

Applicant(s)

JHA, ANJALI

Examiner

Kiet Doan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/01/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (Patent No. 6,192,245) in view of Vayanos (Patent No. 6,718, 174).

Consider **claims 1, 18 and 31**, Jones teaches a method/system of supporting a handover decision in a wireless communication system (Title, C3, L17-26, teach handover decision in a wireless communication). Jones teaches the limitation **but fail to teach** comprising: obtaining an estimate of position, velocity or direction of motion of a subscriber station; and using the estimate, or information derived there-from, to support the handover decision.

In an analogous art, Vayanos teaches "Method and apparatus for estimating velocity of a terminal in a wireless communication system". Further, Vayanos teaches comprising: obtaining an estimate of position, velocity or direction of motion of a subscriber station; and using the estimate, or information derived there-from, to support the handover decision (Abstract, C3, L2-34, teach estimate of position and velocity).

Therefore, it would have been obvious a the that the invention was made that person having ordinary skill in the art to modify Jones and Vayanos system, such that method/system of supporting a handover decision in a wireless communication system

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obtaining an estimate of position and velocity, to provide means for the system can determine when and where the signals can be handover.

Consider **claims 2 and 19**, Vayanos teaches the method of claim 1 wherein the obtaining step comprises: retrieving a stored estimate (C18, L50-58 teach memory unit which can be storing estimate) and returning the retrieved estimate if sufficiently current to be accurate; and deriving an updated estimate and returning the same if the retrieved estimate is insufficiently current to be accurate (C3, L35-67, C4, L1-5 teach the GPS which perform accurate of position/velocity)

Consider **claims 3 and 20**, Vayanos teaches the method of claim 1 wherein the obtaining step is performed in response to a triggering event (Fig.3, Illustrate the obtaining step performed in response to a triggering event).

Consider **claims 4 and 21**, Jones teaches the method of claim 1 wherein the triggering event comprises a determination that the handover rate of the subscriber station exceeds a threshold while the subscriber station is within the coverage area of an umbrella cell (C2, L59-67, C3, L1-4, L58-67, C4, L1-13, Fig.3, Illustrate step of limitation).

Consider **claims 5, 10, 14 and 27**, Vayanos teaches the method of claim 4 wherein the obtaining step comprises obtaining an estimate of the velocity of the

subscriber station (Abstract, C3, L1-11).

Consider **claims 6, 11 and 22**, Jones teaches the method of claim 5 wherein the using step comprises deciding to handover the subscriber station to the umbrella cell if the estimate of the velocity of the subscriber station exceeds a threshold (C2, L59-67, C3, L1-4, L58-67, C4, L1-13, Fig.3, Illustrate step of limitation).

Consider **claims 7 and 23**, Jones teaches the method of claim 6 further comprising blocking a handover back to a micro-cell at least for a time (C3, L1-38, Fig.1, Illustrate handover boundary between micro cell 4 and 3 where handover back to a micro-cell at least for a time).

Consider **claims 8 and 24**, Jones teaches the method of claim 3 wherein the triggering event is a timeout condition occurring while the subscriber station is within the coverage area of an umbrella cell (C3, L58-67, C4, L1-5, Fig.2, No.25, Illustrate the limitation).

Consider **claims 9 and 25**, Jones teaches The method of claim 8 wherein the timeout condition indicates the subscriber station has not experienced a handover within a prescribed period of time (C4, L6-13, Fig.2, No.26, Illustrate the limitation).

Consider **claims 12-13 and 26**, Jones teaches the method of claim 3 wherein the

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triggering event is a directed retry condition (C4, L6-13, Fig.2, No.27 "NO" teach directed retry condition)

Consider **claims 15-17 and 28**, Jones teaches the method of claim 14 further comprising deciding to perform a handover if the one or more estimates indicate (1) the subscriber station is located closer to a target cell than a serving cell; or (2) the subscriber station is moving towards the target cell and away from the serving cell (C3, L5-55, teach deciding to perform a handover, Fig.1, Illustrate the limitation of claim).

Consider **claim 29**, Jones teaches the system of claim 18 wherein the one or more entities comprise a base station controller and a serving mobile location center (C2, L61-67, C3, L1-4).

Consider **claim 30**, Jones teaches the system of claim 18, wherein the one or more entities comprise a mobile switching center and a serving mobile location center (C2, L61-67, C3, L1-4, teach the handover which the mobile switching center and a serving mobile location center is inherent).

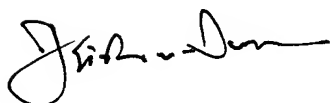
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet Doan whose telephone number is 571-272-7863. The examiner can normally be reached on 8am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kiet Doan
Patent Examiner



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